

Pawnee Nation of Oklahoma

319 Nonpoint Source Pollution Program



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Conservation and Safety

The Pawnee Nation is in north central Oklahoma. The reservation boundaries cross through two counties, Pawnee and Payne. The Pawnee's reservation in Nebraska was sold in 1876 and the Pawnees purchased 283,320 acres of land and water from the Cherokees. In 1893 individual allotments of 160 acres were made to the 821 members and all that remains today is just over 28,000 acres. The tribe still claims rights to the water on the reservation because of the treaties.



A Little bit of History...

- In 1997 the Pawnee Nation established the Department of Environmental Conservation and Safety by passing the Environmental Regulatory Act.
- In 1998, received TAS for the 106 program and began water quality monitoring program,
 - Monitored 5 streams
 - Took a biological approach (chemical, physical and biological analysis)
 - Matlock Periphytometer

A Little bit of History...

- In 2003, submitted our 319 Assessment and Management Plan for review.
- In early 2004, received comments and re-wrote both the Assessment and Management Plan.
- At the same time EPA was reviewing and approved our Water Quality Standards.
- In 2006, submitted revisions of the Assessment and Management Plan they were approved and we submitted a work plan for our first project.

Assessment

- In our Assessment we detailed the results of each waterbody that had monitoring data.
- Determined what parameters were having the most impact on water quality.
- Identified land uses in the watersheds.
- Most difficult was making sense of the 8 years of data collected.

Management Plan

- Determined the NPS Pollution Categories within the Reservation boundaries and Watersheds.
 - Agriculture
 - Silvi-culture/construction
 - Resource Extraction
 - Education

Management Plan

- Nonpoint Source Pollution Categories
 - Agriculture: 90% of Pawnee Indian Country is used primarily for agriculture.
 - Proposed BMPs – riparian restoration by planting trees to help stabilize the stream banks.
 - Also a wetlands project in conjunction with the Bureau of Reclamation, NRCS and other jurisdictions along Black Bear Creek.

Management Plan

- Silvi-culture/Construction:
 - Unimproved roads construction and maintenance.
 - Roads maintained by County Commissioners.
 - Utility right-of-way maintenance.





Bridge Replacement



Let's build a new fence.



Management Plan

- Milestones
 - work directly with the Pawnee Nation Transportation Department to ensure implementation of BMPs on construction sites (have a seat on the Transportation planning committee)
 - Build relationship with County commissioners to ensure they implement BMPs on their projects and stop the current practice of replacing bridges with inadequate whistles.
 - Permit review and comments with EPA on NOI in Pawnee Indian Country

Management Plan

- Resource Extraction
 - 1000 oil & gas wells drilled in Pawnee Indian Country
 - Today only 100 remain active. Many are abandoned or plugged.
 - The Tribe passed the Pawnee Nation Oil Pollution Control Act which gives our Department civil and criminal enforcement. Also provides mechanism for field inspections of tank batteries and operations.

Management Plan

- Milestones
 - Work with producers on trust lands to ensure environmentally friendly mechanism and BMPs are implemented and maintained on-site.
 - Ensure engineered containments are installed at tank batteries and injection wells and correctly maintained and SPCC plans on site or filed with DECS.
 - Work with OCC and USEPA on spills on and off of Trust land.





Management Plan

- Education
 - Participate in outdoor classroom activities with the school systems in our area,
 - Activities include explanation of nonpoint source pollution and water quality,
 - Use macroinvertebrates as indicators of water quality.

Outdoor Classroom



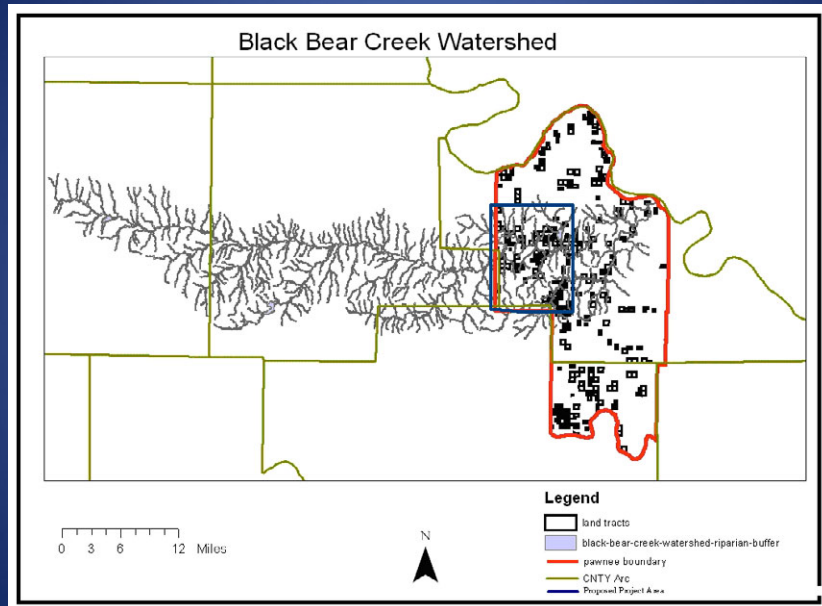
Work Plan

- The overall goal of this project is the implementation of the NPS Program to protect and restore water quality, watershed conditions, wetlands, aquatic and riparian habitat within Pawnee Indian Country.
- The objective is to integrate the NPS Program into the overall environmental program for the protection of the natural resources.

Work Plan

- We identified tasks associated with each pollution category milestone.
- Focus this year on riparian restoration on Black Bear Creek.
- Identified target areas were chosen where the riparian areas are diminished.
- Plant trees





Black Bear Creek Fall of 2006



Black Bear Creek Flood Event March 2008



Black Bear Creek Flooding Event May 2008



Black Bear Creek Last Week



Environmental Results

- Tribal zoning ordinance allows for 100 foot riparian buffer along the creeks on the Tribal Complex and Individual Trust Lands.
- Planting of the Trees will reestablish the diminished buffers and assist in both the erosion and nutrient control.
- Education and outreach to the land managers and users
 - Land users and Tribal Reserve Management Department is used as cost-share

Challenges

- Locating trees
- Large spring rainfall and flooding events this spring and early summer.
- Up-stream flood control lakes slowly releasing in the Creek maintained the high flows for an extended period of time.
- Skepticism and cooperation of land owners and users.

Finally...

- Detail watersheds and historical water quality data in your Assessment.
- Determine specific milestones to be accomplished in your Management Plan.
- Implement a project that will show results.

Thanks for your time.